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REMARKS

Status:

Claims 1-3, 7-10, 12-14 and 18-21 stand rejected under 35 U.S.C. §102(b) as being anticipated by the teaching of U. S. Pat. No. 5,678,015 to Goh. Claims 4-6 and 15-17 are rejected as being unpatentable over the teaching of Goh with Official Notice being taken that storing values such as the position of an icon in an array is known in the computing art. Claims 11 and 22 are rejected as being unpatentable over the teaching of Goh in view of the teaching of U. S. Pat. No. 5,515,486 to Amro et al.

As explained in the analysis below, claims 1-22 are presented for reconsideration in view of the added emphasis on the rounded surface with icons sized and located respective of a user viewpoint. Also emphasized is the orientation of icons to face the viewer to improve ease of identification.

Analysis:

Looking first to the teaching of Goh, there is shown a three-dimensional cube concept for assisting the user in navigating windows bearing icons. The icons appear to be the same size irrespective of their distance from the viewer. There is no indication of sizing icons respective of distance from a viewpoint and window surfaces are not rounded. Icons are , however, distorted in orientation on the two-dimensional view, respective of the face of the cube on which they are located - e.g. the rear face has the text reversed (see Goh Fig. 5). The cube is treated as being transparent so that the icons on a face behind another face are visible in the two dimensional display representation (see again Goh Fig. 5). After a user selects a window, it becomes opaque for ease of viewing (col.6, lines 40-42 and Fig. 6 of Goh).

- 9 -

Amru teaches a polyhedron but again each face represents a window or panel. A panel is not rounded to support a concept of sizing individual icons respective of distance from a viewpoint. Some elements on the panels appear distorted to be consistent with a perspective two-dimensional view.

Applicant, on the other hand, uses a rounded, smooth three-dimensional (3-D) surface for the underlying concept and does not have discrete flat windows or panels with edges. Grid lines reinforce the concept to assist the user; but, are not edges of a respective panel or window. Applicant's icons are scaled respective of icon distance, based on the rounded surface concept, from a selected viewpoint. The ratios are a simple calculation, with icons being full size only at the center of the viewed surface. This respective sizing allows the user to be aware of many clusters of icons on the screen, with simple rotation serving to magnify those moving to the center of view. Likewise, size is reduced as an icon moves away from the center of view.

Applicant has further recognized that the icons, preferably, are not orientated or distorted to reflect an angled position on the surface, as distortion only impairs identification by the user. Hence at applicant's Fig. 4, the smiley face of icon group 440 is as circular as that of icon group 420 even though off toward the edge of the two-dimensionally represented surface and reduced in size.

Applicant provides a 3-D construct that is continuous and allows the user to intuitively navigate the array of icons by rotation. And, unlike the panel polyhedrons of the prior art, Applicant does not distort the icons, as this possibility for consistency with the concept counters the basic icon selection objective. While the technology of Goh's Fig 5 orientations is impressive, the complexity presented to the user seems to distract from selection. And without Applicant's varying icon sizing the icon population that can be presented in a display view would be more limited.

- 10 -

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Applicant recognizes that the more easily the user identifies a desired icon the better, and forward facing icons are most easily identified (see especially claims 1 and 13). Size reduction off-center allows more clusters to be visible at one time on the display and the user, by intuitively rotating icon potential cluster candidates toward the center, increases size to facilitate identification of a desired icon (see especially claims 1 and 12). These aspects of the invention are now more clearly emphasized in the claims and are believed to represent inventive advance over the prior art.

In accordance with the foregoing, it is believed the claims now clearly identify inventive advances over the prior art and early notice that this case has been placed in condition for allowance is earnestly solicited.

Respectfully Submitted,

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- 11 -